



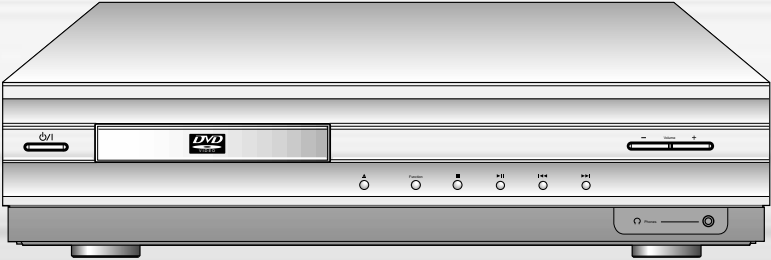
DIGITAL HOME THEATER SYSTEM

HT-DL200

THIS APPLIANCE IS MANUFACTURED BY:



Instruction Manual



AH68-01008B



Safety Warnings

Precautions

CLASS 1 LASER PRODUCT
 KLASSE 1 LASER PRODUKT
 LUOKAN 1 LASER LAITE
 KLAS 1 LASER APPARAT
 PRODUCTO LASER CLASE 1

CLASS 1 LASER PRODUCT

This Compact Disc player is classified as a CLASS 1 LASER product.

CAUTION
 RISK OF ELECTRIC SHOCK.
 DO NOT OPEN

CAUTION:
 TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE REAR COVER. NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

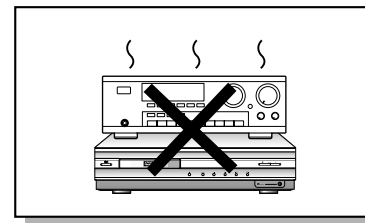
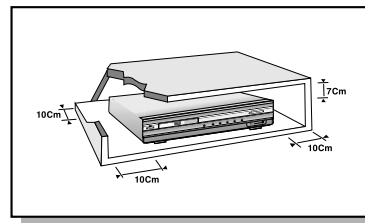
CAUTION-INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED, AVOID EXPOSURE TO BEAM.

This symbol indicates that dangerous voltage which can cause electric shock is present inside this unit.

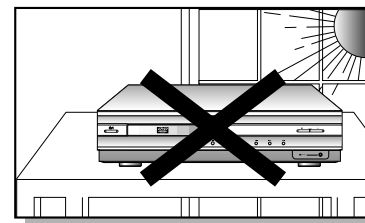
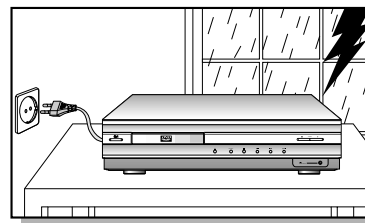
This symbol alerts you to important operating and maintenance instructions accompanying the unit.

WARNING: To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.

CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

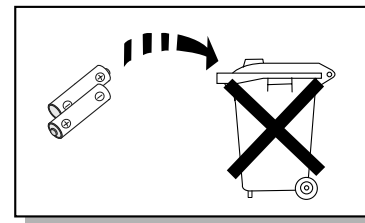
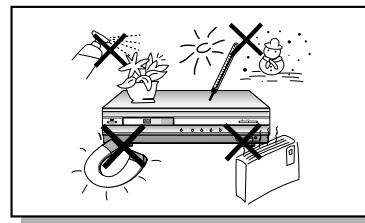


Ensure that the mains supply in your house complies with that indicated on the identification sticker located at the back of your play. Install your player horizontally, on a suitable base (furniture), with enough space around it for ventilation (7~10cm). Make sure the ventilation slots are not covered. Do not stack other, or heavy devices on top over the player. Do not place the player on amplifiers or other equipment which may become hot. Before moving the player ensure the disc tray empty. This player is designed for continuous use. Switching off the DVD player to the stand-by mode does not disconnect the electricity supply. In order to separate the player completely from the mains, it has to be disconnected by unplugging the main plug, especially when left unused for a long period of time.



During thunderstorms, disconnect the main plug from the socket. Main voltage peaks due to lightning could damage the unit.

Do not expose the unit to direct sun radiation or other heat sources. This could lead to overheating and malfunction of the unit.



Protect the player from moisture (dripping or splashing) and that no objects filled with liquids, such as vases, shall be placed on the player, and excess heat (e.g. fireplace) or equipment creating strong magnetic or electric fields (i.e. speakers...) disconnect the power cable from the mains electricity supply if the player malfunctions. Your player is not intended for industrial use but for domestic purposes only. Use of this product is for personal use only. Condensation If your player or disc have been stored in a cold atmosphere, as for example during transportation in the winter, wait for approximately 2 hours until they have reached room temperature.

The battery used in this product contains the chemicals that are harmful to the environment. Do not dispose of batteries in the general household waste. It is recommended that the replacement of the battery should be done by a technician.



Contents



DVD (Digital Versatile Disc) offers fantastic audio and video, thanks to Dolby Digital surround sound and MPEG-2 video compression technology. Now you can enjoy these realistic effects in the home, as if you were in a movie theater or concert hall.



DVD players and the discs are coded by region. These regional codes must match in order for the disc to play. If the codes do not match, the disc will not play.

The Region Number for this player is given on the rear panel of the player.
(Your DVD player with the same regional code will only play DVDs that are labeled with identical region codes.)

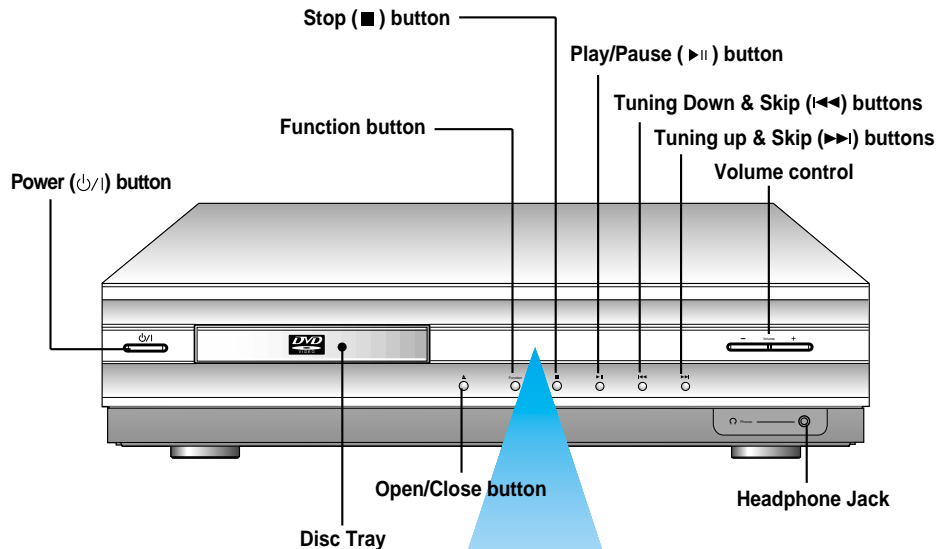
Copy Protection

- Many DVD discs are encoded with copy protection. Because of this, you should only connect your DVD player directly to your TV, not to a VCR. Connecting to a VCR results in a distorted picture from copy-protected DVD discs.
- This product incorporates copyright protection technology that is protected by methods claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

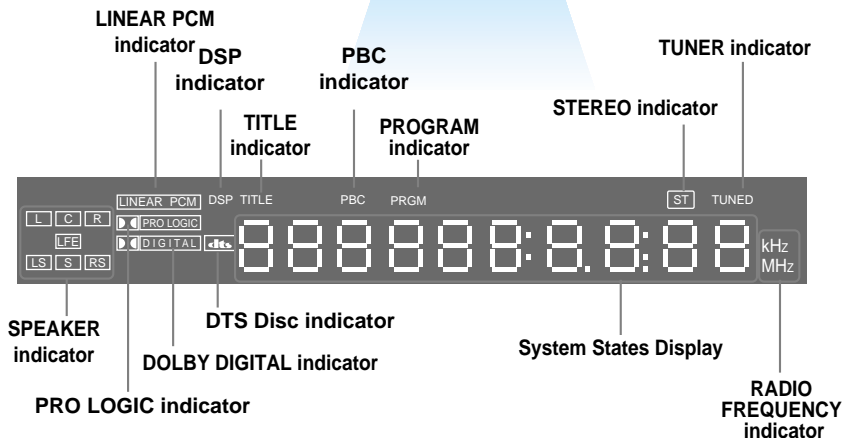
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Description

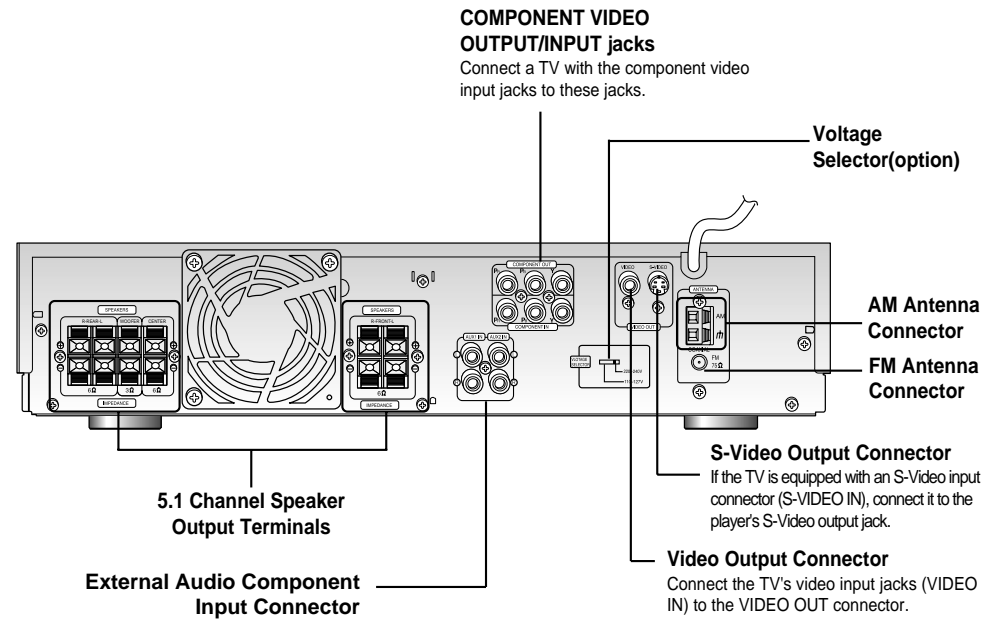
Front Panel



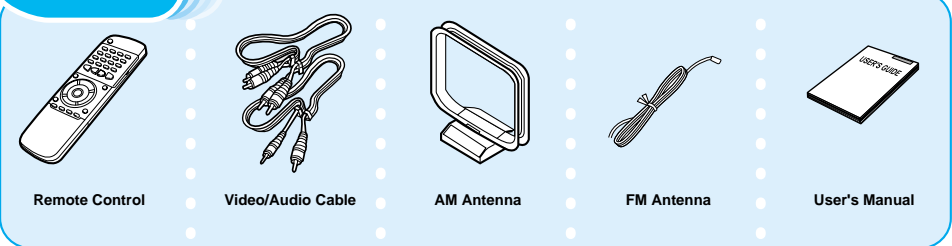
Display

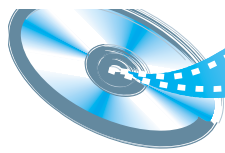


Rear Panel



Accessories





Remote Control Unit

DVD POWER button

- DVD button
- TUNER button
- AUX button

- Title button
- Menu button
- Subtitle button
- Audio MO/ST(mono/stereo) button

- Display button
- Return button
- Go To button

Effect button

DSP button

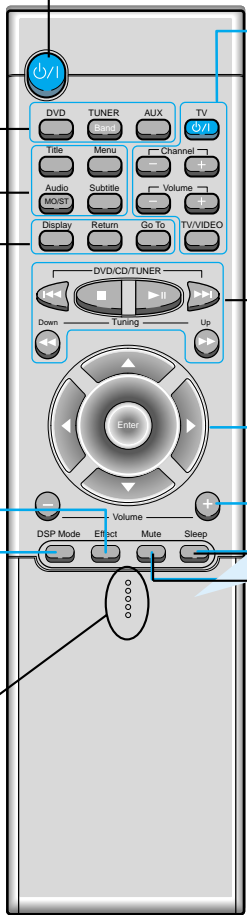
- TV Power button
- TV Channel Selection button
- TV Volume Control button
- TV/VIDEO button

- Play/Pause button
- Stop button
- Tuning Preset/CD Skip button
- Tuning Up/Down/CD Search button

Direction/Enter button

- Volume Control buttons
Speaker output volume control
- Sleep button
- Mute button

To open the cover of the remote control, push the top of the cover, then slide downward.



- Number(0-9) buttons
- Slow button
- Angle button
- Repeat button
- TV System/Zoom button
- Repeat A↔B button
- Setup button
- D.R.C button
- Sound Edit button
- SPK Mode button
- Pro Logic button
- Test Tone button
- Clear button
- Step button
- Program button
- Remain button

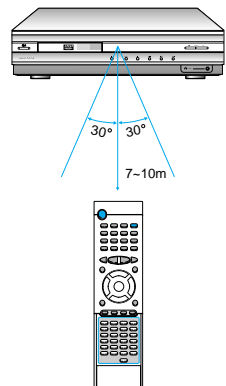
Insert Remote Batteries

- Remove the battery cover on the back of the remote by pressing down and sliding the cover in the direction of the arrow.
- Insert two 1.5V AAA batteries, paying attention to the correct polarities (+ and -).
- Replace the battery cover.

- CAUTION** Follow these precautions to avoid leaking or cracking cells:
- Place batteries in the remote control so they match the polarity:(+) to (+)and (-)to (-).
 - Use the correct type of batteries.Batteries that look similar may differ in voltage.
 - Always replace both batteries at the same time.
 - Do not expose batteries to heat or flame.

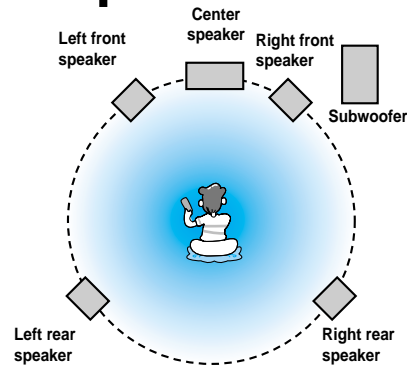
Range of Operation of the Remote Control

The remote control can be used up to approximately 23 feet/7 meters in a straight line. It can also be operated at a horizontal angle of up to 30° from the remote control sensor.

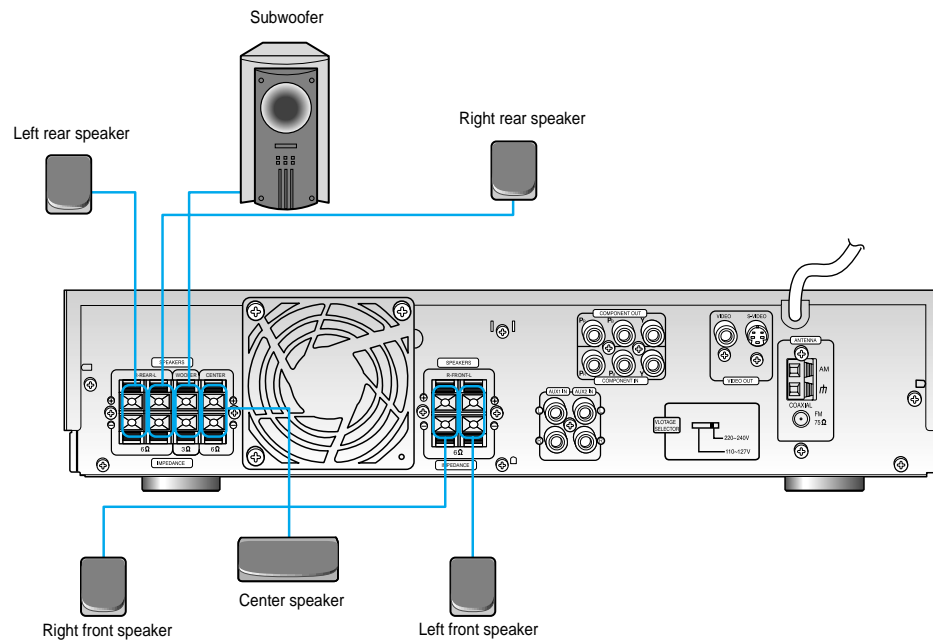
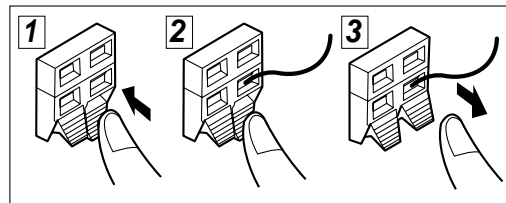


Connecting the Speakers

- Connect the satellite speakers, center speaker, and subwoofer to the terminals on the rear panel using speaker cords supplied.
- Connect the white cord to the red (+) terminal, and the black cord to the black (-) terminal respectively.

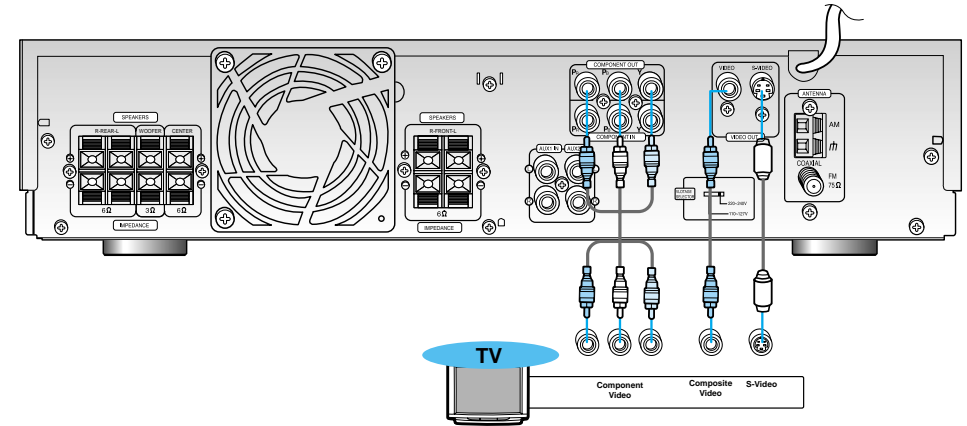


- 1** Press and hold the terminal tab.
- 2** Insert the speaker cord.
- 3** Release the finger.



Note • for in-depth information about adjusting the delay time, see "Speaker Settings" on pages 30.

Connect Video to TV



Composite Video (Good Quality)

Connect the supplied video cable from the VIDEO OUT jack on the back panel of the system to the VIDEO IN jack on your television.

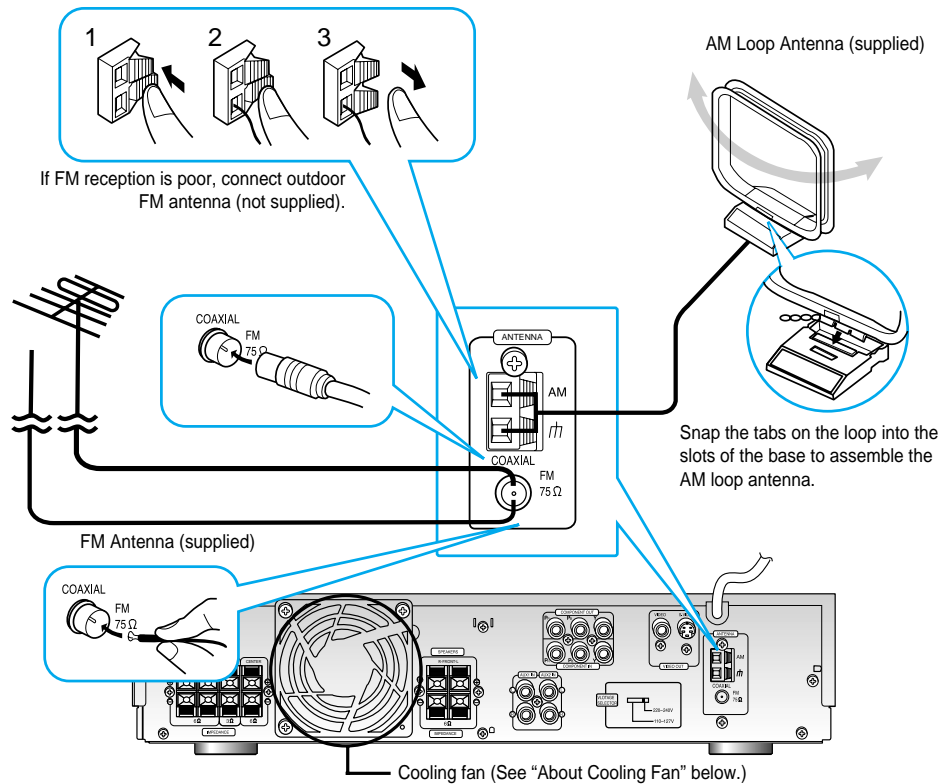
S-Video (Better Quality)

If your television is equipped with an S-Video input, connect an S-Video cable (not supplied) from the S-VIDEO OUT jack on the back panel of the system to the S-VIDEO IN jack on your television.

Component Video (Best Quality)

If your television is equipped with Component Video inputs, connect a component video cable (not supplied) from the Pr, Pb and Y jacks on the back panel of the system to the corresponding jacks on your television.

Connecting the FM and AM(MW/LW) Antennas



FM antenna connection

1. Connect the FM antenna supplied to the FM 75Ω COAXIAL terminal as temporary measure.
2. Moderately strain the antenna wire and then fasten it to a wall or other rigid surface within a location where reception is good.

- If reception is poor, connect an outdoor antenna. Before attaching a 75Ω coaxial cable (with a standard type connector), disconnect the supplied FM antenna.

(About the cooling fan)

A cooling fan is mounted on the rear panel of the center unit to prevent abnormal temperature inside the center unit, thus assuring normal operation of the unit. The cooling fan automatically starts rotating to supply external cool air to the inside of the center unit when the internal temperature exceeds the specified limit.

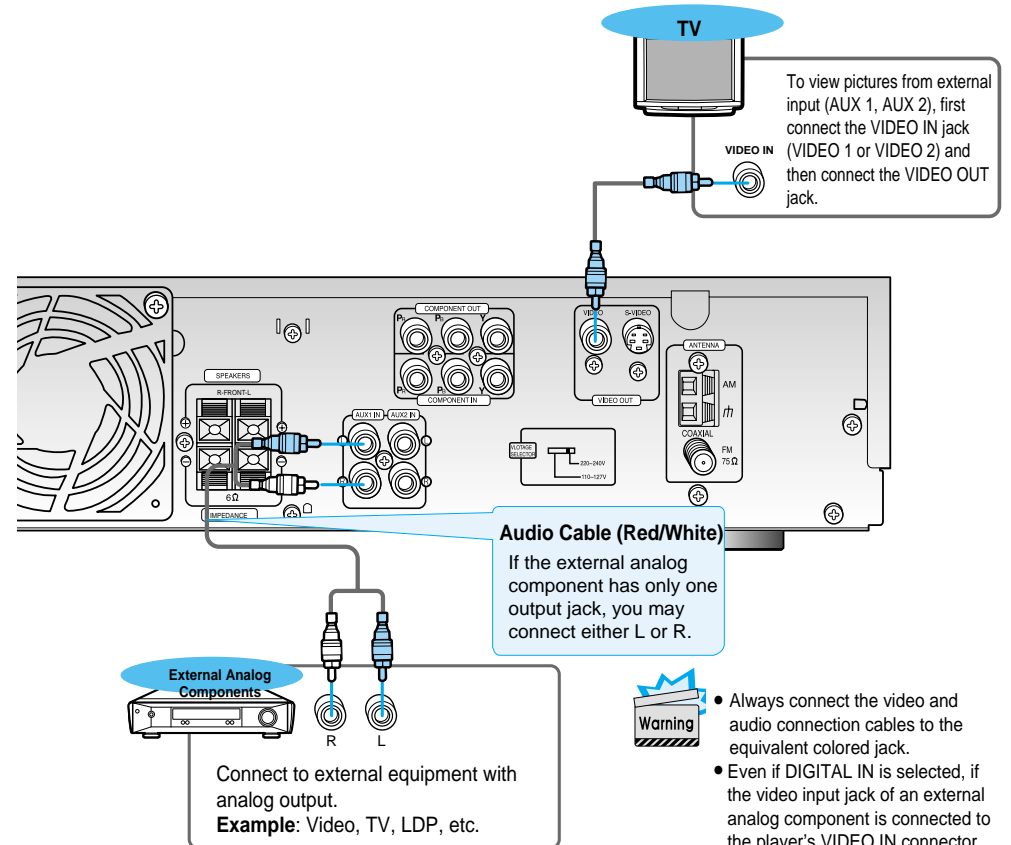
AM(MW) antenna connection

1. Connect the AM loop antenna supplied to the AM and π terminals.
2. If reception is poor, connect an outdoor single vinyl-covered wire to the AM terminal. (Keep the AM loop antenna connected).

For safety, observe the following carefully.

- Make sure there is good ventilation around the center unit. Poor ventilation could overheat and damage the center unit.
- DO NOT block the cooling fan and the ventilation openings or holes. (If they are blocked by a newspaper or cloth, etc., the heat may not be able to get out.)

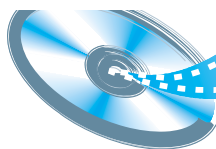
AUX Connections



- Always connect the video and audio connection cables to the equivalent colored jack.
- Even if DIGITAL IN is selected, if the video input jack of an external analog component is connected to the player's VIDEO IN connector, the player will still output a video signal from the analog component.

Making Analog Input Selection

- Remote Control** → Press the **AUX** button and select AUX1 IN, AUX2 IN.
- Main Unit** → Press the **Function** button and select AUX1 IN, AUX2 IN.



Before Using the DVD Player

Your DVD player is capable of playing DVD, VCD, and CD discs. User instructions may vary depending on the type of disc. Read the instructions carefully before use.

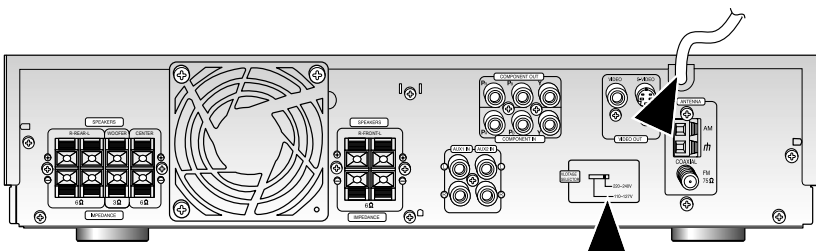
Connecting your System to the Power Supply

The main lead must be plugged into an appropriate socket.

Before plugging your system into a main socket, you must check the voltage.

Check the position of the voltage selector on the rear of the system (OPTIONAL).

1. Plug the main lead (marked AC Cord on the rear of the system) into an appropriate socket.
2. Press the On/Standby button to switch your DVD Player system on.

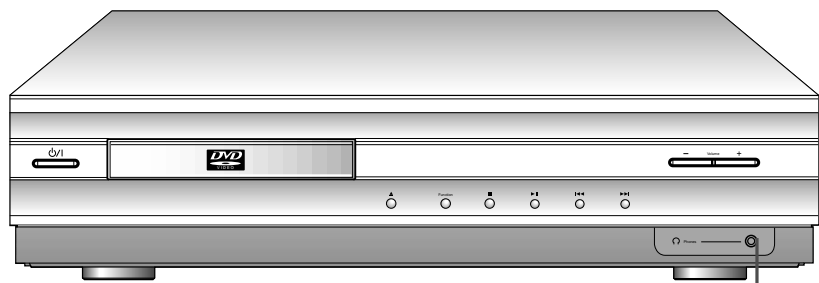


Listening on headphones

Use headphones for private listening pleasure (not supplied).

Connect the headphones to the HEADPHONES jack of the front panel.

- No sound is produced from the speakers.
- To prevent hearing damage, do not raise the volume level excessively when using headphones.



HEADPHONE jack

1

Preparations before use

Turn on the power to your DVD player and TV.



2

Select a video mode by pressing the TV/VIDEO button.



3

Press the DVD button to select the DVD input function.



Note

- The "WAIT" message that appears on the display for about seven to eight seconds when turning on the power or selecting a DVD function indicates a stabilization period for optimizing the condition of your DVD player. While the message is being displayed, other buttons remain inactive.
- When the power is not turned on, press down the Stop (■) button on the main unit for over 5 seconds. The inside of the product will be initialized to its optimum state.
- If your TV model is not SAMSUNG, refer to "Remote Control Unit Setup" on page 28.

TV System Selection



Press the TV System button while in stop mode.

- Each time the TV System button is pressed, "NTSC, PAL" are selected in this order.
- ※ Different countries use different types of TV broadcast systems, video, audio and channel systems.
- Example :** The player cannot playback PAL-encoded DVD with NTSC-TV.

CD-R/RW playback compatibility

- Your DVD player can also play CD-R and CD-RW discs recorded in digital audio format. When recording your own CD-R or CD-RW discs, make sure that the recording session is properly terminated, or they will not be playable. (Depending on disc properties and recording quality, some CD-R/RW may not be playable.)
- CD-RW has a lower reflection rate than CD-R media and consequently it will take a longer to read CD-R discs.
- CD-RW discs recorded at high speed tend to be difficult for the DVD player to read. If the recording speed for the CD-RW disc is not predetermined, write it at low speed.

DVD Playback

- 1**

Press the **Open/Close** (▲) button to open the disc tray.

 - The button is located only on the Front Panel of the player (not on the remote).
- 2**

Insert a DVD disc.

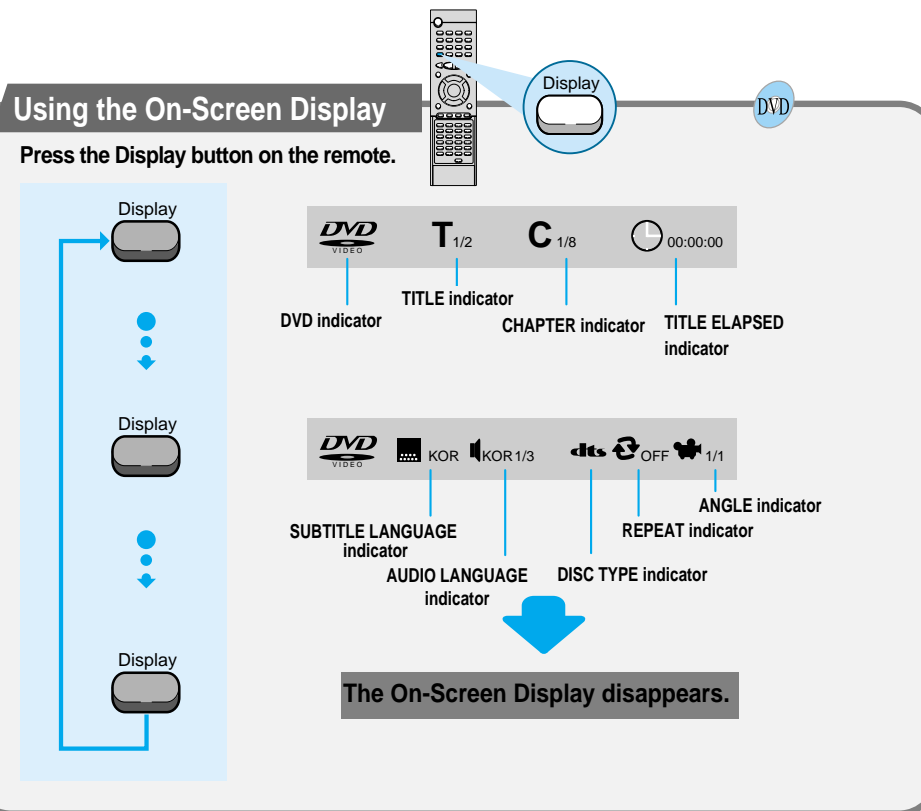
 - Place a disc gently into the tray with the disc's label facing up.
- 3**

Press the **Open/Close** (▲) button again to close the disc tray.

 - Playback starts automatically.

Using the On-Screen Display

Press the **Display** button on the remote.



The OSD displays the following information:

- Top Row:** DVD indicator, TITLE indicator (T 1/2), CHAPTER indicator (C 1/8), TITLE ELAPSED indicator (00:00:00).
- Bottom Row:** SUBTITLE LANGUAGE indicator (DVD VIDEO, KOR), AUDIO LANGUAGE indicator (KOR 1/3), DISC TYPE indicator (OFF), REPEAT indicator (1/1), ANGLE indicator.

The On-Screen Display disappears.

Pausing Playback



Press the **Play/Pause** (▶||) button during playback.

- To resume, press the Play/Pause (▶||) button again.

Note Depending on the disc, the initial disc information screen may look disc to disc.

Stopping Playback



Press the **Stop** (■) button during playback.

- During playback, when the Stop (■) button is pressed, the position is stored in the memory, and ■ STOP is shown on the display. When the Play/Pause (▶||) button or Return button is pressed subsequently, playback resumes from the position at which it was stopped.
- If the Stop (■) button is pressed a second time, the resume play' memory function is canceled, and ■ STOP is shown on the display. When the Play/Pause (▶||) button is pressed, playback starts from the beginning.

What is a Title?

A movie contained in a DVD disc.

What is a Chapter?

Each Title on a DVD disc is divided into several smaller sections called "chapters".

Turning the sound off temporarily?



Press the **Mute** button during playback.

- This operation may be useful when you need to greet the guests or answer the telephone.

Note If the player is left for more than 3 minutes in pause mode, it will stop.

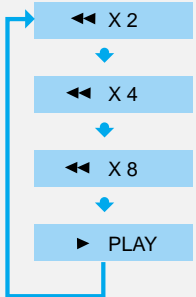
Forward/Reverse Searching

During playback, you can search quickly through a chapter or track for a specific scene or tune.

High-Speed Playback

Press the ◀◀ and ▶▶ button.

Each time the ◀◀ button is pressed



Each time the ▶▶ button is pressed

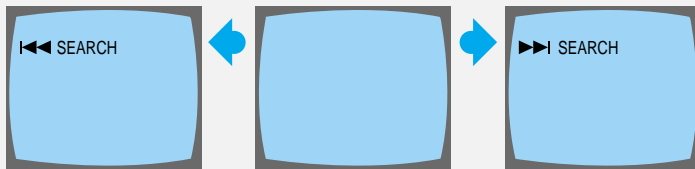


- ◀◀ playback (reverse playback) is possible on DVDs.

Skipping through a Chapter

Press the ◀◀ and ▶▶ button.

- Each time the button is pressed during playback, it moves to the next or previous chapter and plays it.
- However, you cannot skip forward or backward through consecutive chapters.



Playing Frame by Frame

Press the Step button.

- The picture moves forward one frame each time the button is pressed.

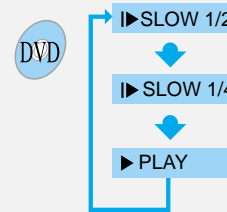
Note No sound is heard during high-speed playback, slow playback, and step motion.

Slow Playback/Checking the Remaining Time

Playing Slowly

Press the Slow button.

Each time the Slow button is pressed



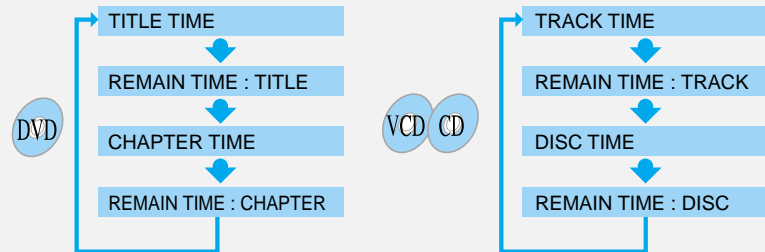
The slow playback speed changes and the selections (1/2X, 1/4X, 1/8X, 1/16X and normal play) are repeated.

Checking the Remaining Time

Press the Remain button.

- For checking check the total time and the remaining time of a title or chapter being played.

Each time the Remain button is pressed

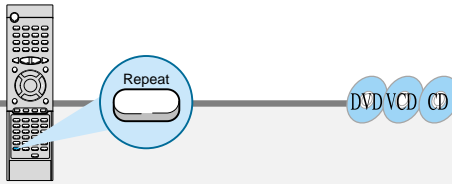


Repeat Playback

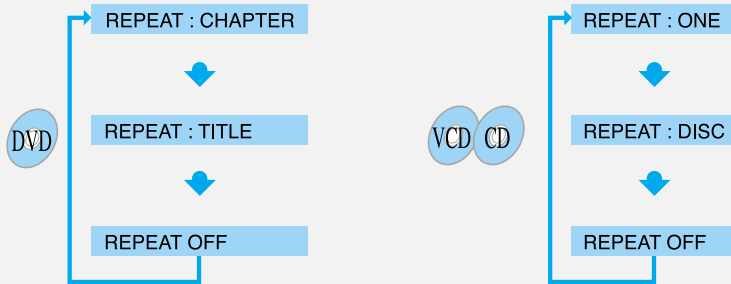
Repeat playback allows you to repeat a chapter, title, or track.

Playing Repeatedly

Press the Repeat button.



Each time the Repeat button is pressed



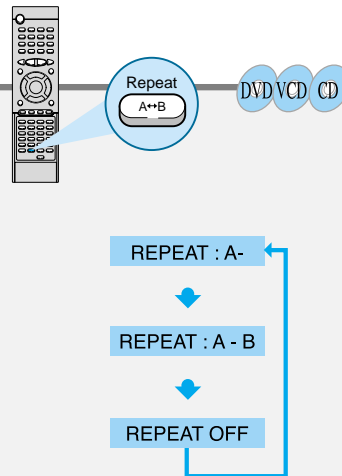
Note • Repeat playback operation is not possible with version 2.0 VCD discs if PBC is turned on. To operate this feature, press the MENU button, and then select "PBC OFF".

A↔B Repeat Playback

- 1 Press the **Repeat A↔B** button at the beginning (A) of the segment you want to review.
- 2 Press the **Repeat A↔B** button again at the end (B) of the segment you want to review.
 - The segment will begin repeating.

To return to normal playback

Press the Repeat A↔B button again.



Using Disc Menu/Title

To Select the Disc Menu

You can use the menus for the audio language, subtitle language, profile, etc. DVD menu contents differ from disc to disc.

1

Press the **Menu** button during playback.

2

Use the **Up/Down** (▲ / ▼) or **Left/Right** (◀ / ▶) button to access the different features.

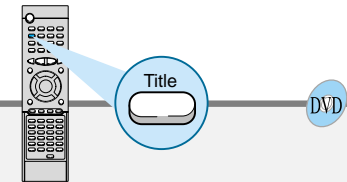
3

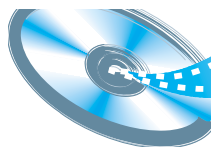
Press the **Enter** button.

- The Menu Screen appears.
- When playing a VCD version 2.0, you can operate it using PBC On/Off function.
- The selected item will play.

Using the Title Menu

For DVDs containing multiple titles, you can view the title of each movie. Depending on the disc, this function may either not work at all, or may work differently.





Program Playback

Use this function with video and music CDs to play the tracks in a particular order.

To Program Tracks in a particular order



DVD

1

Press the **Program** button.

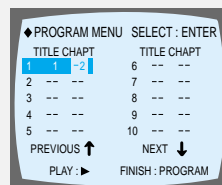
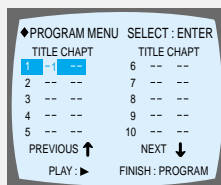
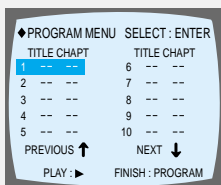
2

Press the **Enter** button then use the Number buttons to select the desired title.

3

Press the **Enter** button, then use the Number buttons to select the desired chapter.

- You can use also just the **Left/Right** (◀/▶/▲/▼) button.
- You can use also just the **Left/Right** (◀/▶/▲/▼) button.



4

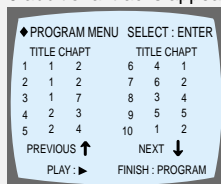
Press the **Enter** button.

5

At this time, you can continue programming if you want to.

- The selected track number is programming and the cursor moves to the next number.

- When programming more than 10 tracks, select **NEXT**↓ and then press the **Enter** button. The program selection screen where you can program up to 10 additional tracks appears.



To Playback the Tracks in the Programmed Order



Press the **Play/Pause** (▶||) button.

To Change the Program

DVD

1

Press the **Up/Down** (▲/▼) button to select the track number to be changed.

2

Press the **Enter** button to select the title or chapter to be changed.

3

Press the **Clear** button and then press the Number buttons.

- The cursor moves to the next number when the **Enter** button is pressed again.
- You can use also just the **Left/Right** (◀/▶) button.

4

Press the **Enter** button.

5

Repeat steps 1-4 above to change the program.

- The cursor moves to the number below.

To delete the entire Program

- Press the **Stop** (■) button twice during playback.
- Press the **Stop** (■) button once when in the Stop mode.
- Press the **Open/Close** (▲) button on the main unit. The disc tray will open and then close. The program will then be deleted.

When you have entered a wrong number



Press the **Clear** button.

- When you want to delete a selection during programming, select the track (or chapter, or title) to be deleted and then press the **Clear** button.

Note

You can program or change particular tracks for VCD or CD discs in the same manner.

To Cancel the Programming

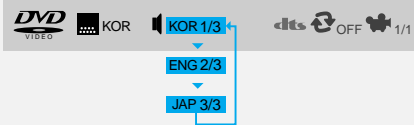
- Press either the **Program** button or **Stop** (■) button.

Selecting the Audio Language/Subtitle Language

Selecting the Audio Language

Press the Audio button.

- Depending on the number of languages recorded on a DVD disc, a different audio language (KOREAN, ENGLISH, JAPANESE, etc.) is selected each time the button is pressed.

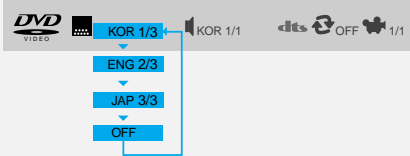


Note Depending on the disc, DTS or DIGITAL PRO LOGIC can be selected.

Selecting the Subtitle Language

Press the Subtitle button.

- Depending on the number of languages recorded on a DVD disc, a different subtitle language (KOREAN, ENGLISH, JAPANESE, etc.) is selected each time the button is pressed.
- To make the subtitles disappear, select "OFF".



Note

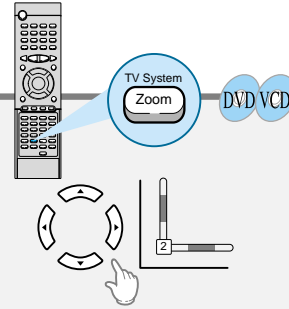
- The word $\text{\textcircled{X}}$ INVALID appears on the TV screen!
- If this message appears on the TV screen while buttons are being operated, that operation is not possible with that particular disc.
- Depending on the disc, the audio or subtitle language function may not work.

Various DVD Functions

To enlarge an image

Press the Zoom button.

- Images can be enlarged 2x and 4x.
- During DVD playback, press the Zoom button to zoom in 2X/4X/normal, in that order.
- Press \blacktriangleleft / \blacktriangleright / \blacktriangleup / \blacktriangledown to move the enlarged portion you want to watch.



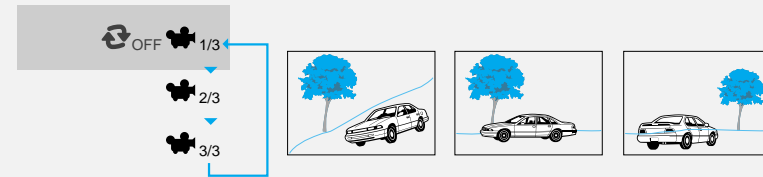
Note

- Only 2X zoom operation is possible during VCD playback.

Selecting the desired Screen Angle

Press the Angle button.

- This function only works with discs on which multiple angles have been recorded.
- During playback, press the Angle button to select the desired angle in 1/3, 2/3, 3/3, normal, in that order.



To move directly to a title, chapter, or time

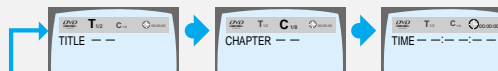
1

Press the Go To button.

2

Press Number(0-9) button or the Left/Right (\blacktriangleleft / \blacktriangleright) button.

- Each time the button is pressed, it repeats as shown below.



- Each The desired scene is located and then played.
- Depending on the disc, the Title function may not work.

System Setup

You can use the DVD player's Setup function to select the TV screen ratio, rating limit, or digital output mode.

To Set up the System

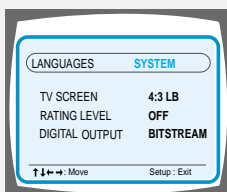
1

From the stop mode, press the **Setup** button.



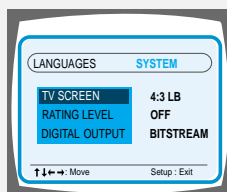
2

Press the **Left/Right** (◀/▶) button to select the system.



3

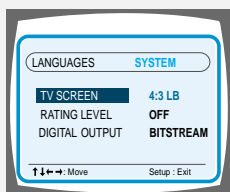
Press the **Up/Down** (▲/▼) button to select the desired item.



4

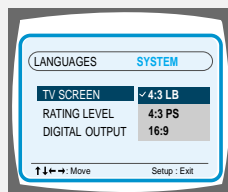
Press the **Enter** button or **Right** (▶) button.

- Move to the detailed items.
- Then press the **Left** (◀) button to return to the previous step.



5

Press the **Up/Down** (▲/▼) button to select the desired sub-item and then press the **Enter** button.



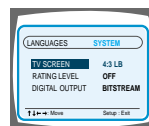
To End the System Setup

- Press the **Setup** button again.



TV SCREEN(TV SCREEN RATIO)

Select when you want to watch a 16:9 screen ratio DVD movie on a TV with a 4:3 ratio screen.



4:3LB

You can see the full 16:9 picture, but black bars will appear at the top and bottom of the screen.

4:3PS

You can only view the central portion of the 16:9 screen.

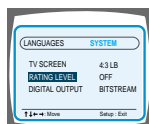
16:9

You can view in wide screen but the top and bottom of the picture will be cut off.

- However if the movie is recorded in 4:3 ratio, you cannot view the full 16:9 picture with the above functions.

RATING LEVEL

The Rating Level function works in conjunction with DVDs which have been assigned a rating, to help control the type of DVD that your family watches.

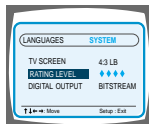


1. **Select RATING LEVEL, then press the Enter button.**

When the rating level password has been forgotten

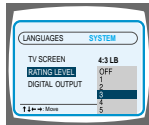
While the player is in the stop mode, hold the **Stop** (■) button down on the main unit for more than 5 seconds.

- "INITIAL" appears on the display and all default settings will return to Factory Preset.



2. **Use the number(0-9) buttons to input a 4-digit password.**

- The player's password is set to "7890" by default.



3. **Use the Up/Down (▲/▼) button to select either RATING LEVEL or NEW PASSWORD, and then press the Enter button.**

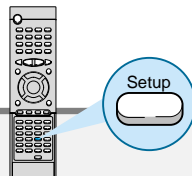
- There are up to 8 rating levels on a disc.
- If LEVEL 6 is selected, a disc which contains rating LEVEL 7 and above cannot be played.
- If you select NEW PASSWORD, the screen changes and enables you to enter the new password.

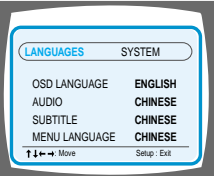

Setting up the Language Features

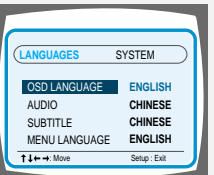
Using the DVD player's Setup function, you can customize the Menu Language, Subtitle Language, and Disc Menu Language.

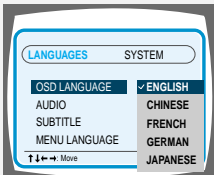
To set up the language feature

- Press the **Setup** button from the stop mode.


- Press the **Up/Down** (▲/▼) button to select the desired item.



- Press the **Enter** button or **Right** (▶) button.


- Press the **Up/Down** (▲/▼) button to select the desired language and then press the **Enter** button.



To End the Language Features Setup

- Press the **Setup** button again.

Controlling a TV with the Remote

The remote can also be set up to control most TVs. To program the remote, use the code that corresponds to your brand.

- Turn on the TV.
- Point the DVD's remote at the TV.
- While holding the **TV** button down, enter the code for your brand.

Code	Brand	Code	Brand
01	SAMSUNG 1	16	SHARP 3
02	SHARP 2	17	ZENITH
03	SONY	18	LG 3
04	MAGNAVOX	19	DAEWOO 8
05	SANYO 1	20	SANYO 2
06	LG 2	21	EMERSON
07	RCA	22	SHARP 3
08	LG 1	23	SAMSUNG 4
09	TOSHIBA	24	MATSUSHITA
10	HITACHI	25	NOBLEX
11	JVC	26	TELEFUNKEN
12	PANASONIC 1	27	NEWSAN
13	MITSUBISHI 2	28	LOEWE
14	SAMSUNG 2	29	RCA2
15	SAMSUNG 3		

example : For SAMSUNG 1TVs
While holding down the **TV** button, enter **00 + 1**.



Note If your TV does not switch from VIDEO mode to TV mode, press the TV POWER button twice.

- The remote may not be able to control every model TV of the brands listed.

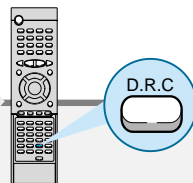

4 If the TV turns off, setup is complete.

Dynamic range compression (DRC) function

This function allows for fullness of sound with Dolby Digital effect even when playing at low volumes during nighttime listening.

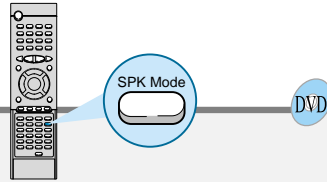
Press the D.R.C button.

- The selection switches back and forth between "D.R.C. ON" and "D.R.C. OFF" each time the button is pressed.
- This function only works when in the Dolby Digital mode.

Speaker Setup

Setting up Speaker Mode and Delay Time



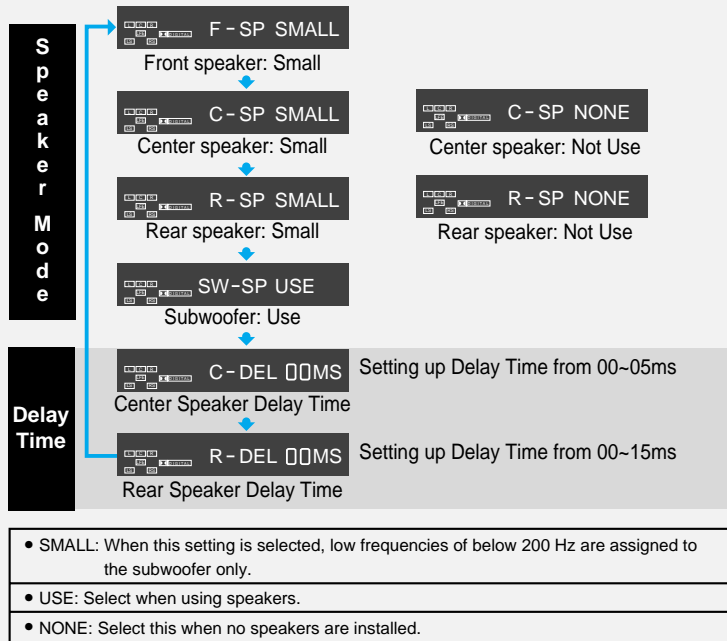
1

Press the SPK Mode button.

2

Press the Left/Right (◀ / ▶) button to select the desired item.

- Each time the button is pressed, a different mode selection is displayed on the front panel display as shown below.



To set the delay time

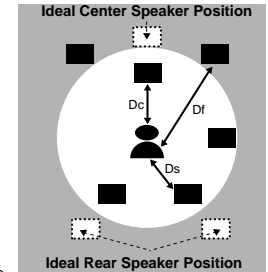
- When 5.1 Channel Surround Sound is played, you can enjoy the best sound if the distance between you and each speaker is the same. You can set Delay Time in the Center/Rear Speaker to customize the sound to the acoustics of your room.
- Setting Center Speaker**
If the distance of Dc is equal to or longer than the distance of Df in the figure, set the mode as 0ms. Otherwise, change the setting according to the table on the table.
- Setting Rear Speakers**
If the distance of Df is equal to the distance of Ds in the figure, set the mode as 0ms. Otherwise, change the setting according to the table.

(A)=Df-Dc

Distance of (A)	Value(ms)
50	1.3
100	2.6
400	3.9
200	5.3

(B)=Df-Ds

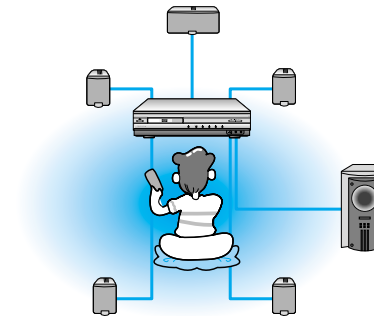
Distance of (B)	Value(ms)
200	5.3
400	10.6
600	15.9



Arrange all speakers within a circle as shown in the figure.

Dc: Distance from center speaker to listening position
Df: Distance from front speakers to listening position
Ds: Distance from rear speakers to listening position

Speaker Setting Methods



Front Speakers ● ● ●

Set the front speakers so that their tweeters (high-range) are aligned at about ear level and at a horizontal angle of 45° to the prime listening position.

Center Speaker ● ● ●

Ideally the center speaker should be positioned with its top surface flush with the front speakers. However, you may place the speaker either on top or near the bottom of your TV set.

Rear Speakers ● ● ●

Set the rear speakers further back parallel to the walls, at 60 to 90 centimeters (2 to 3 feet) above prime listening position ear level.

If the space behind the listening position is insufficient (i.e., too close to the wall), place the rear speakers facing each other on either side.

Subwoofer Speaker ● ● ●

Place the subwoofer at any convenient location within the vicinity of the listening position.

Note The display changes depending on the current audio output mode (DSP, PRO LOGIC, 3-STEREO, STEREO, etc.).

Speaker Setup

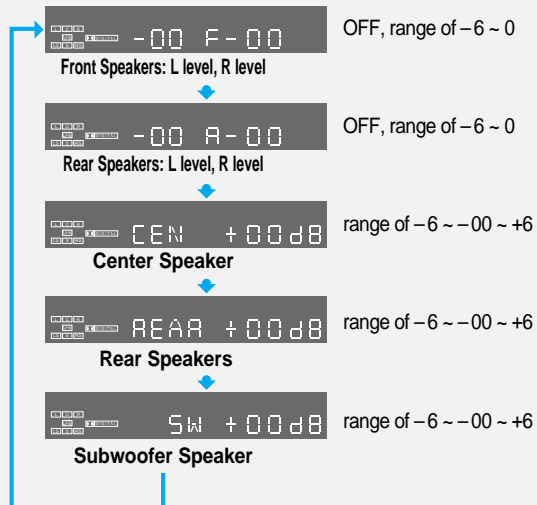
To set up Speaker Balance

1

Press the **Sound Edit** button.

- Each time the button is pressed the selection switches as shown below.

Example: 5.1CH Sound Setup



Note The display changes depending on the current audio output mode (DSP, PRO LOGIC, 3-STEREO, STEREO, etc.).

Speaker Setting Methods

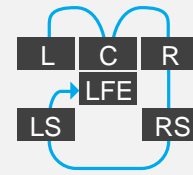
Press the **Test Tone** button.

- The test signal will be sent to the Left Front, Center, Right Front, Right Rear, Left Rear and Subwoofer in that order.

To End the Language Features Setup

- Press the **Test Tone** button again.

Note While in DSP or PRO LOGIC mode, TEST TONE may operate differently for VCDs or CDs



Selecting Dolby Pro Logic

Press the **Pro Logic** button.

Converts Dolby Surround encoded 2-channel sound (e.g., program material received by Stereo VCR could be Dolby Surround encoded 2-channel material that can be decoded into 4-channel sound using the Dolby Pro Logic mode). Pro Logic mode can also be enjoyed when in DVD mode or when playing Dolby Digital or PCM material that are Dolby Surround encoded.

1

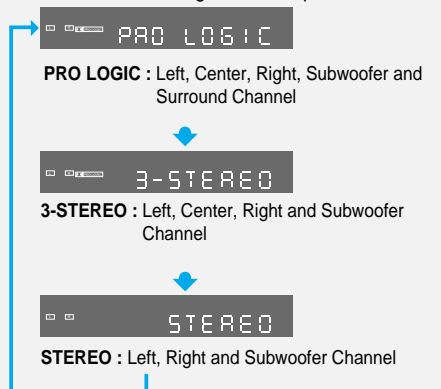
Press the Function Selection button to select the desired function.

- Select from FM, AM, DVD and AUX 1 IN, AUX 2 IN.

2

Press the **PRO LOGIC** button.

- Each time the Pro Logic button is pressed



Creating Realistic Sound Fields


You can use the following surround to reproduce a realistic sound field.

- Digital Multichannel Surround —Dolby Digital and DTS Digital Surround
- Dolby Surround

Dolby Digital and DTS Digital Surround

To enjoy surround effectively,all the speakers need to be connected and activated.

Dolby Digital

Used to reproduce multichannel sound tracks of the software encoded with Dolby Digital ().


Dolby Digital encoding method (so-called discrete 5.1 channel digital audio format)records and digitally compresses the left front channel,right front channel,center channel,left rear channel,right rear channel,and LFE channel signals (total 6 channels,but LFE channel is counted as 0.1 channel.Therefore,called 5.1 channel).

Since each channel is completely independent from the other channel signals to avoid interference,you can obtain much better sound quality with much stereo and surround effects.

In addition,Dolby Digital enables stereo rear sounds,and sets the cutoff frequency of the rear treble at 20 kHz,compared to 7 kHz for Dolby Pro Logic.These facts enhance the sound movement and being-there feelings much more than Dolby Pro Logic.

When the system detects Dolby Digital signals,the DOLBY DIGITAL indicator lights up on the display.

DTS Digital Surround

Used to reproduce multichannel sound tracks of the software encoded with DTS Digital Surround ().

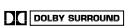
DTS Digital Surround is another discrete 5.1 channel digital audio format available on CD,LD,and DVD software.

Compared to Dolby Digital,audio compression rate is relatively low.

This fact allows DTS Digital Surround format to add breadth and depth to the reproduced sounds.As a result,DTS Digital Surround features natural,solid and clear sound.

When the system detects DTS Digital Surround signals,the DTS indicator lights up on the display.

Dolby Surround

Used to reproduce sound tracks of the VCR tapes encoded with Dolby Surround ().

This is only used for the sound sources coming through the AUX IN jacks.

Dolby Pro Logic and Dolby 3 Stereo

Dolby Surround encoding format records the left front channel, right front channel,center channel,and rear channel signals (total 4 channels)into 2 channels.

The **Dolby Pro Logic** decoder built in this system decodes these 2 channel signals into original 4 channel signals — matrix-based multichannel reproduction,and allows you to enjoy a realistic stereo sound in your listening room.

When one of Dolby Surround is selected,the PRO LOGIC indicator lights up on the display.

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Manufactured under license from Digital Theater Systems, Inc. US Pat. No. 5,451,942 and other world-wide patents issued and pending. "DTS" and "DTS Digital Surround" are trademarks of Digital Theater Systems, Inc. ©1996 Digital Theater Systems, Inc. All rights reserved.

DSP Function

To Select a DSP

Press the DSP Mode button.

- The DSP mode toggles in the following order each time the DSP button is pressed:
HALL → THEATER → PAVILION →
DANCE CLUB → LIVE CLUB.

What is a DSP?

DSP synthetically recreates the sound field to achieve a more realistic, powerful sound.

Note

- DSP mode cannot be selected when a microphone is connected.
- When playing a DVD encoded in two or more channels, DSP mode cannot be selected.

To Increase Effect level

Press the Effect button.

- The effect level can be set in steps from 1 to 4
EFFECT1 → EFFECT2 → EFFECT3 →
OFF(DEFAULT).
Each time the button is pressed the selection moves to the next effect.
- The higher the number, the stronger the DSP surround effect will be.

What is a Effect?

This sets the strength of the DSP mode.

Listening to the Radio

You can listen to the chosen band (FM, AM broadcast stations) by using either the automatic tuning or manual tuning operation.

Remote Control Unit

1

Press the **Tuner(Band)** button.

- The selection toggles back and forth between "FM" and "AM" each time the **Tuner(Band)** button is pressed.

2

Select a broadcast station.

Auto Station 1 When the **◀▶** button is pressed, a preset broadcast station is selected.

Auto Station 2 Hold in the **◀▶** button. Automatic searching begins, and then stops when a station is tuned in.

Manual Station Press the **◀▶** button to tune to the chosen station. The frequency changes incrementally in either direction each time the corresponding button is pressed.

Main Unit

1

Press the **Function** button to select the desired band (FM, AM).

2

Select a broadcast station.

Auto Station 1 Press the **PRESET** button to select the PRESET mode. Then press the **◀▶** button to select a station stored in the preset

Auto Station 2 Press the **Stop** button to select the MANUAL mode on the front panel. Then hold in the **◀▶** button to make the unit begin automaticall searching for broadcast stations.

Manual Station Press the **Stop** button to select the MANUAL mode front panel. Press the **◀▶** button to tune to the desired station. The frequency changes incrementally in either direction each time the corresponding button is pressed.

To Listen in Mono/Stereo



Press the **MO/ST** button. (only FM)

- The selection toggles back and forth between "STEREO" and "MONO" each time the **MO/ST** button is pressed.
- In a poor reception areas, select Mono mode for a clear, interference-free broadcast.

Presetting stations

You can store up to:

- 15 FM stations
- 15 AM stations

- FM** Frequency Modulation
- AM(MW)** Medium Wave

Example: Presetting FM 89.1 in the memory

1

Press the **Tuner(Band)** button and select the FM band.

2

Select the **MANUAL** by pressing the **Stop** button on the main unit.

3

Use the **◀▶** and **▶▶** button to tune into 89.1



4

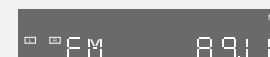
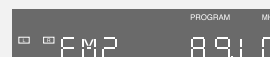
Press the **Program** button.

5

Use the **◀▶** and **▶▶** button to select FM2.

6

Press the **Program** button.



- The selection toggles back and forth between "FM" and "AM" each time the **Tuner(Band)** button is pressed.
- The preset stations operation is completed.
- When using this feature for the first time, be sure to store the station in the preset memory at FM1 as the unit does not come preprogrammed with default presets.

To change the Preset Stations

- Store the changes while repeating steps 1 to 4 above.

To store other Channels

Repeat steps 3 to 4 above.

Sleep Function

To set up Sleep

Press the Sleep button.

- Each time the button is pressed the selection toggles as follows: SLEEP 10 → SLEEP 20 → SLEEP 30 → SLEEP 60 → SLEEP 90 → SLEEP 120 → SLEEP 150 → OFF.

To Review Sleep Setting

- The remaining time for the selected Sleep time is displayed.
- Pressing the button once again changes the Sleep time from the last setting.

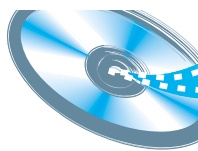


What is the Sleep function?

You can set the delay time so that the unit powers off automatically after a preset period of time.

Troubleshooting

Problem	Check
The disc tray does not open.	<ul style="list-style-type: none"> • Is the disc installed with the label side facing up? • Is the power cord plugged securely into the power outlet? • Turn off the power to the unit by pressing the Power (⏻) button and turn it back on.
Disc does not play.	<ul style="list-style-type: none"> • Check the region number of the DVD. • DVD discs purchased abroad may not be playable. • This player cannot play CD-ROMs, DVD-ROMs, etc. • Check the rating level of the DVD.
Playback does not start immediately when the Play/Pause button is pressed.	<ul style="list-style-type: none"> • Check whether the disc has any scratch marks or is deformed?
No sound is produced.	<ul style="list-style-type: none"> • No sound is heard during high-speed playback, slow playback, and step motion playback modes. • Are the speakers properly connected? Is the speaker Setup correctly customized? • Is the disc severely damaged? The disc may be dirty. Wipe off fingerprints or dirt.
Sound can be heard only from a few speakers and not all six.	<ul style="list-style-type: none"> • When listening to a CD or radio, sound is output to the front speakers only (L/R). Select the "PRO LOGIC" option by pressing the Pro Logic button on the remote control unit to use all six speakers. • Check whether your DVD disc is 5.1 CH compatible.
Picture does not appear; sound is not produced; the disc tray opens 2-5 seconds later.	<ul style="list-style-type: none"> • Was the player moved suddenly from a cold place to a warm one? When condensation forms inside the player, remove the disc and let the player stand for 1 or 2 hours with the power on. (You can use the player after the condensation disappears.)
Sound quality is irregular.	<ul style="list-style-type: none"> • Are the speaker cables loose? • Is there any dirt or debris at the end of the speaker connector?
Dolby Digital 5.1 Channel Surround Sound is not being reproduced.	<ul style="list-style-type: none"> • Does the disc being played show the "Dolby Digital 5.1CH" mark ? 5.1-channel sound is reproduced only if the disc is recorded with 5.1 channel sound. • Is the DVD player connected to the proper speakers?



Cautions on Handling and Storing Discs

Small scratches on the disc may reduce sound and picture quality or cause breaks in playback. Be especially careful not to scratch discs when handling them.

Problem	Check
<ul style="list-style-type: none"> • The disc revolves but no picture appears. • Picture shows interference and quality is poor. 	<ul style="list-style-type: none"> • Is the TV power turned on? • Are the video cables properly connected? • Is it the player in PAUSE mode? • Is your TV's video format (NTSC/PAL) set correctly? Press the NTSC/PAL button once again to change the current selection. • Is there any dirt on the disc, or is the disc damaged? • It may not be possible to play some DVD discs due to poor manufacture. • When a dark scene changes to a bright scene during playback, the screen may flicker vertically. Some disturbance is normal.
<p>Remote control unit does not operate.</p>	<ul style="list-style-type: none"> • Is the remote control being used within the appropriate distance and angle of operation for the unit? • Are there any obstacles between the remote control unit and the remote control sensor? • Are the batteries dead? Is it time to replace the batteries with new ones?
<p>Audio or subtitle language does not operate.</p>	<ul style="list-style-type: none"> • The audio or subtitle language features does not operate with DVDs that do not include multiple audio or subtitle languages.
<p>The Menu button is pressed but the Menu screen does not appear.</p>	<ul style="list-style-type: none"> • Is the remote control being used within the appropriate distance and angle of operation for the unit? • Are the batteries dead? • Does the disc have a Menu?
<p>The screen ratio cannot be changed.</p>	<ul style="list-style-type: none"> • You can play 16:9 wide DVDs in 16:9 WIDE mode or 4:3 LETTER BOX mode or 4:3 PAN-SCAN mode; but 4:3 encoded DVDs only show in 4:3 ratio. Refer to the DVD disc jacket and then select the appropriate function.
<p>The desired radio station cannot be tuned in.</p>	<ul style="list-style-type: none"> • Is the antenna installed properly? • When the antenna's input signal is weak, install an external FM antenna in an area with good reception quality.
<p>The system is malfunctioning (the system does not work or no sound).</p>	<ul style="list-style-type: none"> • While the player is in the stop mode, hold the Stop (■) button down on the main unit for over 5 seconds. "INITIAL" appears on the display and all settings will return to the Factory Preset condition. The RESET function erases all settings; do not use this function unless necessary.

Handling and Storing Discs



When you get fingerprints or dirt on the disc, clean it with a mild detergent diluted in water and wipe with a soft cloth.

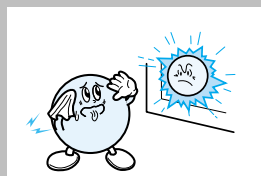
- When cleaning, wipe gently from the inside to the outside of the disc.



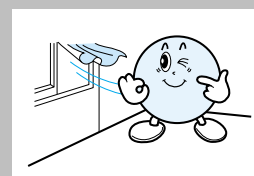
Condensation may form if warm air comes into contact with cold parts inside the player. When condensation forms inside the player, the player may not operate correctly. If this occurs, remove the disc and let the player stand for 1 or 2 hours with the power on.

Disc Storage

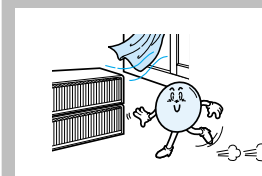
Do not keep in direct sunlight



Keep in a cool ventilated area






Keep in a clean Protection jacket. Store vertically.



- Do not allow the discs to become contaminated with dirt.
- Do not load cracked discs or discs that are scratched.

Disc Type and Protection

Usable Discs

Disc Types	Marks	Recording Types	Disc Size	Max. Playing Time
DVD		Audio + Video	12cm	Approx. 240 min. (Single-sided)
				Approx. 480 min. (Double-sided)
			8cm	Approx. 160 min. (Single-sided)
				Approx. 160 min. (Double-sided)
VIDEO-CD		Audio + Video	12cm	74 min.
			8cm	20 min.
AUDIO-CD		Audio	12cm	74 min.
			8cm	20 min.



Dolby Digital disc



DTS Disc



Digital Audio disc



Stereo disc



NTSC broadcast system in USA, Canada, Japan, South Korea, etc..



PAL broadcast system in U.K, France, Germany, etc.




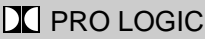

Do not use the following types of disc!

- LD, CDG, CD-I, CD-ROM and DVD-ROM cannot be played on this player.
- DVD discs purchased abroad may not play on this player.
If such discs are played, a "WRONG REGION CODE" message appears on the TV screen.

Specification

GENERAL	Power Consumption	160W		
	Weight	9.1Kg		
	Dimensions	W 430mm x D 370mm x H 100mm		
	Operating Temperature Range	+5°C~+35°C		
	Operating Humidity Range	10%~75%		
FUNCTION	Usable Sensitivity	10dB		
	S/N Ratio	60dB		
	Distortion	0.5%		
AMT	Usable Sensitivity	54dB		
	S/N Ratio	40dB		
	Distortion	2%		
VIDEO INPUT	Component Video	Y:1.0Vp-p(75Ω load), Pr:0.70Vp-p(75Ω load) Pb:0.70Vp-p(75Ω load)		
VIDEO OUTPUT	Composite Video	1.0Vp-p(75Ω load)		
	Component Video	Y:1.0Vp-p(75Ω load) Pr:0.70Vp-p(75Ω load) Pb:0.70Vp-p(75Ω load)		
		Luminance Signal: 1.0Vp-p(75Ω load) Color Signal: 0.286Vp-p(75Ω load)		
	S-VIDEO			
AMPLIFIER	Front speaker output	50W x 2(6Ω)		
	Center speaker output	50W(6Ω)		
	Rear speaker output	50W x 2(6Ω)		
	Subwoofer speaker output	100W(3Ω)		
	Frequency range	20Hz~25KHz		
	S/N Ratio	75dB		
	Channel separation	50dB		
	Input sensitivity	(AUX)500mV		
SPEAKER	Speaker system	5.1ch speaker system		
		Front/Center/Rear speaker	Subwoofer speaker	
	Impedance	6Ω x 5	3Ω	
	Frequency range	150Hz~18KHz	45Hz~200Hz	
	Output sound pressure level	87dB/W/M	86dB/W/M	
	Rated input	50W	100W	
	Maximum input	100W	200W	
	Dimensions	Front/Rear	138mm x 202mm x 140mm	250mm x 403mm x 335mm
		Center	370mm x 140mm x 140mm	
Weights	Front/Rear	1.6Kg	6.8Kg	
	Center	2.2Kg		

Note on Terminology

ANGLE	Recorded onto some DVD discs are scenes which have been simultaneously shot from a number of different angles (the same scene is shot from the front, from the left, from the right, etc.). With such discs, the Angle button can be used to change the angle of view for specific scenes.
CHAPTER NUMBER	These numbers are recorded on DVD discs. A Title is subdivided into many sections, each of which is numbered, and specific parts of the video can be searched quickly using these numbers.
DVD	A high-density optical disc on which high-quality pictures and sound have been recorded by means of digital signals. Incorporating a new video compression technology (MPEG-2) and high-density recording technology, a DVD disc comprises two 0.6 mm thick discs bonded together.
PCM	An acronym for Pulse Code Modulation - another name for digital audio.
PBC (PLAYBACK CONTROL)	This is recorded on a video CD (version 2.0). Selected scenes or information can be chosen from the menu displayed on the TV monitor.
REGION NUMBER	Both the DVD player and DVD discs are encoded with a region number. If the region number on the DVD disc does not correspond to the region number of the DVD player, the player cannot play the disc.
SUBTITLES	Translated appearing at the bottom of the screen. A DVD disc can contain up to 32 subtitle languages.
TITLE NUMBER	These numbers are recorded on DVD discs. When a disc contains two or more movies, these movies are numbered as Title 1, Title 2, etc.
TRACK NUMBER	These numbers are assigned to the tracks which are recorded on video and audio CDs. They enable specific tracks to be located quickly.
VIDEO CD	Contains recordings of pictures and sound whose quality is roughly comparable to that of video tape. This player also supports video CDs with playback control (version 2.0).
	You can enjoy 5.1 (or 6) channels of high fidelity digital sound from various digital input sources such as laser discs, DVD, CD etc. DTS provides a realistic, clear surround sound that has not previously been available from conventional surround sound.
	5.1 (or 6) Channel Digital Surround sound reproduced from DVDs and LDs recorded as a digital signals (with  disc marking). With better sound quality, dynamic range, and directionality than the traditional Dolby surround technology, you can enjoy the dynamic realistic sound.
	A 4 channel analog sound reproduced from a program source such as a videotape or LD with the  mark. You can enjoy a more realistic, robust sound unavailable from regular stereo sources.